

ABSTRACT OF THE DISCLOSURE

In a low-pass filter, the filter characteristics equivalent to those of a conventional low-pass filter are maintained, the size of a capacitive element is decreased, and the low-pass filter operates stably. Further, a MOS capacitor is used as a capacitive
5 element. For such purposes, in a low-pass filter including a first capacitive element, and a resistive element and a second capacitive element which are connected in series to the first capacitive element, a first electric current is supplied to the first input terminal connected to one end of the first capacitive element, and a second electric current is supplied to the second input terminal connected to the other end of the first capacitive element. Herein,
10 the capacitance value of the first capacitive element is set according to the magnitude of the first electric current. Further, the resistive element is provided with a power supply that is connected in series to the resistive element, and a voltage equal to or higher than the threshold voltage of a MOS transistor is always applied between the second input terminal and the ground.